Digitized by the Internet Archive
in 2010 with funding from
University of Toronto

http://www.archive.org/details/n03officialproceed21cana

ENGIN STORAGE

TF
1
C2
1922
no, 3
ngineering

R CRUMPTON
President
W. A. BOOTH
Secretary
P. P. REYNOLDS
Treasurer

OFFICIAL PROCEEDINGS
Meeting of March 1922.

Volume XXI
No. . . . 3

25c. per copy

VICTORIA UNIVERSITY
LIBRARY

CORPORATED
OCTOBER
1913

Canadian Railway Club

MONTREAL

PARVA SUB INGENTI

CONTENTS

Report of March Meeting and paper and discussion on "The Railway Chief Clerk, His Problems, Duties and Required Qualifications"

AUG 19 19

TUCO PRODUCTS CORPORATION.
Passenger Car Specialties—National Standard Roofing—Tuco Flexolithe Composition Flooring—Trap Doors "National" and "Universal"—Window Screens "Imperial" and "Universal"—Insulation "Tucork" and "Resisto."

LIBERTY MANUFACTURING COMPANY.
Arch Tube Cleaners.

STANDARD PAINT & VARNISH CO.
Paints and Varnishes.

NATHAN MANUFACTURING COMPANY.
Lubricators, Injectors, Top Checks, Side Checks and everything in brass for the locomotive.

BROWN & CO., INCORPORATED.
Stay Bolt and Engine Bolt Iron.

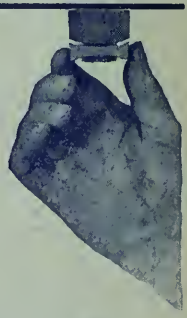
RIVET CUTTING GUN COMPANY.
Rivet Cutting Gun—Slag Gun.

ADAMS & WESTLAKE COMPANY.

HARRY VISSERING & COMPANY.
Locomotive Bell Ringers and Sanders.

SELLING AGENTS: **The Consolidated Equipment Company Limited**
263 ST. JAMES ST., MONTREAL.

BOSS LOCK NUTS



In figuring ways and means of reducing maintenance costs, you may rest assured that, as far as lock nuts are concerned, you will make the greatest saving by specifying Boss Lock Nuts.

The reason is: Boss Lock Nuts save time and labor in application—turned on with the fingers, just like a common nut, then given a turn with a wrench that locks them permanently, or until removed with a wrench. Naturally, the ease of application causes no injury to bolt threads and implies no waste of energy.

When you save time, labor and bots it helps to keep maintenance costs down.

When specifying them be sure to write it RIGHT! Say BOSS Lock Nuts.

Send for latest catalog.

BOSS NUT COMPANY, Chicago, U.S.A.
Head Office in Canada: 263 ST. JAMES STREET, MONTREAL
Also 413 McINTYRE BUILDING, WINNIPEG

MITCHELL
MONTREAL

RAILWAY PASSENGER CAR FITTINGS

NICKELINE WASHSTAND TOPS

NICKELINE WATER COOLERS

DUNER CAR HOPPERS

MANUFACTURERS OF METAL GOODS

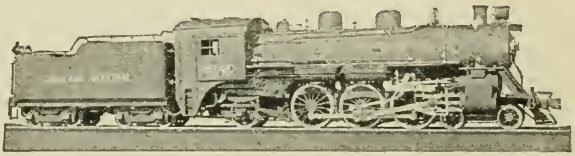
BRASS FOUNDERS IRON FOUNDERS

Established 1851

THE ROBERT MITCHELL COMPANY, LIMITED.

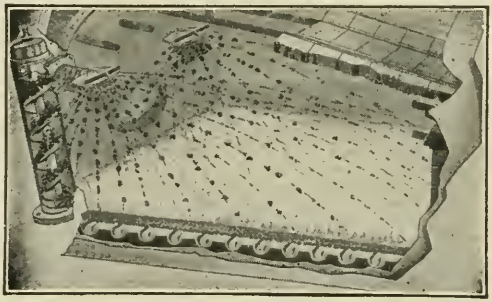
MONTREAL, P. Q.

PACIFIC TYPE PASSENGER LOCOMOTIVE
CANADIAN NATIONAL RAILWAYS



Total weight of engine, 260,000 pounds
Weight on drivers, 164,600 pounds
Diameter of drivers, 69 inches
Boiler pressure, 200 pounds
Cylinders, 23½ x 28 inches
Maximum tractive power, 38,100 pounds

MONTREAL LOCOMOTIVE WORKS, LTD.
DOMINION EXPRESS BUILDINGS, MONTREAL, CANADA



Duplex Stokers Distribute Coal Uniformly

Duplex Stokers handle all kinds of coal with best results, reduce clinkering and make fire cleaning an easy job. Engines fired by the Duplex will either shorten the trip time over the road, or will haul more cars per train in the same trip time. Hard schedules are helped along.

4,500 of Our Stokers on 76 Railroads

"The Harder You Pound Them The Better They Steam,"

—said a fireman of his Duplex Stoker-fired Engine.

Locomotive STOKER Company

Pittsburgh Chicago
New York Washington

EVERYTHING IN RUBBER

DOMINION RUBBER SYSTEM

MADE IN CANADA

DOMINION RUBBER SYSTEM

HEAD OFFICE, MONTREAL.

Service Branches in the Largest Cities throughout Canada.

Dominion Rubber System products include:

Air Brake Hose (Regular and Special "Non-freezing").
Air Signal Hose.
Steam Heating Hose.
Vacuum Hose.
Hot Water Hose (white).
Cold Water Hose.
Air Hose—For Drills & Pneumatic Tools.
Hose Pipes—Corrugated.
Heavy Suction Hose.
Wire-lined Gas Hose.
Fire Hose and Supplies.
And Hose for Every Special Use.

Red Sheet Packing.
"Canadian" Spiral Packing.
Pure Gum Sheet.
Valves—For Hot and Cold Water (all densities for any pressure).
Perfolid Pat. Rubber.
Moulded Car Mats.
Hammer Bumpers.
Air Brake Gaskets.
Special Moulded Goods, for every Mechanical Use.
Tubing—all sizes.
Rubber Strips.

Rubber Boots and Shoes: "Jacques Cartier" "Merchants" "Dominion," "Granby," "Daisy," and "Maple Leaf" Brands.

"FLEET FOOT" SPORTING AND OUTING SHOES
DOMINION RAYNSTERS, THE "MADE-IN-CANADA" RAINCOATS

"DOMINION" Auto Tires, Truck Tires, Carriage Tires, Motorcycle and Bicycle Tires.

Rubber Goods for all Railway and Industrial Purposes

Original "Diamond" Design Inlaid Rubber for Standard Traps and Platforms and Interiors of Cars. Estimates and Samples cheerfully furnished.

West Disinfecting Co.

Manufacturers of

DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS AND SANITARY APPLIANCES.

301 Casgrain Street, Montreal, P.Q.

STEEL

Castings:

Bolsters, Couplers,
Type "D", "Penn" Type,
Draft Arms,
Truck Side Frames,
Locomotive and Car,
Miscellaneous.

Forgings:

Car Axles,
Shafting,
Billets.

Rolled:

Universal Plate,
Sheared Plate,
Agricultural Shapes,
Sheets.

Dominion Foundries and Steel
LIMITED
HAMILTON - - ONTARIO.

THE

PENN FREIGHT COUPLER

Overhead or Underneath Release without
:: :: :: change in details of coupler :: :: ::

Five square inches bearing surface
:: :: :: between lock and knuckle :: :: ::

All the Up-to-Date Features:
"Lock-to-the-Lock," "Lock-Set," and "Knuckle-Opener"

Licensee for Canada

Dominion Foundries & Steel Ltd.
HAMILTON, ONT.

Take No Chances, Specify

B.&W. WATER TUBE Boilers

BABCOCK & WILCOX, LIMITED
ST. HENRY, MONTREAL

West Disinfecting Co.
Manufacturers of

DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS AND SANITARY APPLIANCES

301 Casgrain Street, Montreal, P.Q.

West Disinfecting Co.
Manufacturers of
DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS
AND SANITARY APPLIANCES
301 Casgrain Street, Montreal, P.Q.

MADE IN CANADA

Factors That Increase
Locomotive Effectiveness

FRANKLIN RAILWAY SUPPLY COMPANY OF CANADA, Limited

625 Transportation Building
MONTREAL

CANADIAN GOLD CAR HEATING
& LIGHTING COMPANY, LIMITED
MANUFACTURERS OF
CAR HEATING APPARATUS OF EVERY
DESCRIPTION
STEAM—VAPOR—COMBINATION—HOT WATER
ELECTRIC PRESSURE REGULATORS—VENTILATORS
THERMOSTATIC CONTROL FOR ALL SYSTEMS
346 ST. JAMES STREET. MONTREAL, CANADA.

TAYLOR & ARNOLD ENGINEERING COMPANY
LIMITED

Railway and Marine Supplies

MONTREAL WINNIPEG

WORKS:

100 ANN STREET, MONTREAL

West Disinfecting Co.

Manufacturers of

DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS AND SANITARY APPLIANCES

301 Casgrain Street, Montreal, P.Q.

Baldwin Service Is Complete

One of the most important features of Baldwin Service is our ability to manufacture and forward to destination duplicate and repair parts to keep locomotives in good serviceable condition.

Now is the time to send orders for all parts necessary to repair bad-order locomotives

The Baldwin Locomotive Works
Philadelphia

WESTINGHOUSE AIR BRAKES

For Steam and Electric Railways

AMERICAN
AUTOMATIC SLACK ADJUSTERS

Air Compressors, Electric Locomotives and Electrical Apparatus of every description

BUILT FOR THE DOMINION BY

CANADIAN WESTINGHOUSE CO., Limited

General Office and Works: HAMILTON, ONT.

MONTREAL, TORONTO, HALIFAX, VANCOUVER WINNIPEG, CALGARY
OTTAWA (Ahearn & Saper, Ltd.) FORT WILLIAM

ADDRESS NEAREST OFFICE

"PYLE-NATIONAL"

The Pioneers in Manufacture of Locomotive Electric Headlights.

A COMPLETE LINE OF

steam Turbo-Generators-500 Wat to 5 K. W.
Headlight Cases-Sheet & Cast Metal
Reflectors-Metal & Glass
Lamps for Rear of Tender and Lighting Accessories

THE YOUNG VALVE GEAR.

The Pile-National Company.

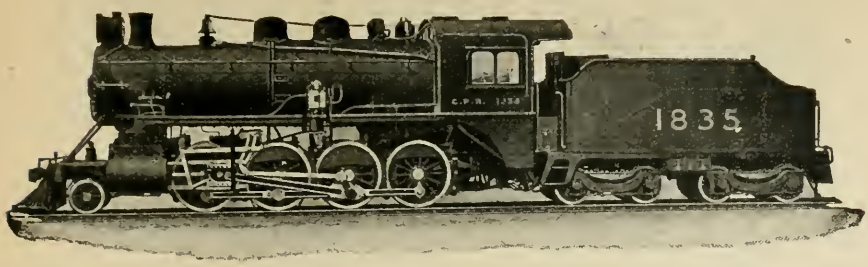
1334 Nort Kostner Ave., Chicago Ills,
Canada The Holden Co., Ltd., Montreal,

West Disinfecting Co.

Manufacturers of

DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS AND SANITARY APPLIANCES.

301 Casgrain Street, Montreal, P.Q.



Consolidation Type Engine built for the

CANADIAN PACIFIC RAILWAY COMPANY OF CANADA

BY THE

CANADIAN LOCOMOTIVE CO.

Limited

BUILDERS OF

LOCOMOTIVES

FOR ALL CLASSES OF SERVICE

KINGSTON, - - ONT.

West Disinfecting Co.

Manufacturers of

DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS AND SANITARY APPLIANCES.

301 Casgrain Street, Montreal, P.Q.

All Canadian Railways use our Standard Steel Platform

When they realize the merits of our

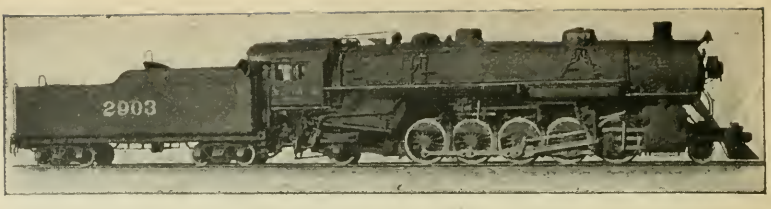
SESSIONS-STANDARD FRICTION DRAFT GEAR

They will ALL use it (some do now)
It is daily growing in popularity

Both made by

STANDARD COUPLER COMPANY

30 CHURCH STREET, NEW YORK



LIMA

There's a fortune in suitable engines.
It takes a little more forethought before ordering.
But the results are multiplied by 30 years.
Go into the design question thoroughly.
Lima will cooperate.

LIMA LOCOMOTIVE WORKS

Incorporated

17 East 42nd Street,
New York City —

Lima, Ohio.

No Loss from Leaks
No Upkeep Costs
No Replacement Costs

Dart Union Pipe Couplings

Are as near a Perfect Union
as it is possible to make them

"Golden Glow" Locomotive Head Lights
Demountable Mirror Units and
Keystone Turbo-Generators

ARE DIFFERENT AND DECIDEDLY BETTER.
MAY WE SHOW YOU HOW AND WHY?

LYMAN TUBE & SUPPLY CO., Limited
MONTREAL TORONTO WINNIPEG NEW YORK

"Imperial" Prismatic
Glass
Pressed Prism Plate Glass Company
CHICAGO — OFFICES — NEW YORK

B. J. COGHLIN CO., Limited
Manufacturers of
Springs, Track Tools,
:: Railway Supplies ::
OFFICE AND WORKS:
Ontario Street East - Darling and Davidson Streets
MONTREAL

West Disinfecting Co.
Manufacturers of
DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS
AND SANITARY APPLIANCES
301 Casgrain Street, Montreal, P.Q.

What Has Superheating Done For Your Road?

You would not care to be without superheaters on your locomotives.

They have proved themselves the most effective single factor in increasing economy and capacity.

The superheaters you are familiar with have produced such results because they are based on the best engineering practice which we can obtain. This is followed by our own inspection and service work, in order to produce continuously the economies aimed at.

And they are MADE IN CANADA.

THE SUPERHEATER CO.

LIMITED

TRANSPORTATION BLDG., MONTREAL, QUE.

WORKS AT SHERBROOKE, QUE.

Designing Engineers and Manufacturers of Superheaters and Pipe Coils for all classes of service.

Feed Water Heaters for Locomotives.

Quality STEEL Service

AND

IRON

PRODUCTS OF EVERY DESCRIPTION

From Ore Mines to Export

THE STEEL COMPANY OF CANADA, LIMITED

HAMILTON MONTREAL

International

CANADIAN NATHAN LIMITED

Locomotive Specialties: Lubricators, Injectors, Top Checks, Side Checks, Line and Intermediate Checks, Gauge Clocks, Reflex Water Gauges, Steam Whistles, etc., etc.

PAXTON, MITCHELL, LIMITED

Piston Rod and Valve Steam Packing for Superheat and Saturated Conditions.

"THE PACKING THAT PACKS."

Pneumatic Tools, Rivetters, Chippers, Rivet Busters or Cutters, Drop Forged Rivet Snaps.

REYNOLD'S

Oxy-Acetylene, Oxy-Hydrogen Cutting and Welding Torches and Regulators, Resistal Chipping and Welding Goggles and Helmets.

INTERNATIONAL PLASTIC METALLIC PACKING

Complete Line of Electrical Devices and Supplies.

International Machinery & Supply Co., Ltd.

421 St. James St. - - - Montreal

WHY JOLIETTE STEEL CASTINGS ?

In the Locomotive and Car Shops they know what a clean and accurate Casting means in time saved.

Money can be saved on Steel Castings, An apparently low-priced casting often requires an excessive amount of machining, so that it is, in reality, a costly article. Accuracy to shape and uniform steel quality are the two features of Joliette Steel Castings which should be borne in mind when considering questions of price.

Accuracy to shape and uniform steel quality mean that Joliette Steel Castings require a minimum of machining. They are economical castings for that reason. No one can afford to waste his machinist's time. In addition Joliette Castings have given the highest tests, a further guarantee of economy in use.

We manufacture Electric Steel Castings for Locomotive, Car and Maintenance work. All Castings true to pattern, well SAND BLASTED and Annealed.

Manganese steel castings for Dredges & Shovels, Frogs, etc.
Vanadium " " Valve Gear Parts.

"JOLITE"---A special Steel for GrateBars and other parts requiring a strong, hard material which resists wear particularly when subjected to high temperatures.

MURRAY ALL STEEL DRAFT GEAR.---EMERGENCY KNUCKLES. DRAFT YOKES.---CAR REPLACERS.

JOLIETTE CASTINGS & FORGINGS LIMITED

326 TRANSPORTATION BLDG. MONTREAL.

WORKS: JOLIETTE, QUE.

MORE POWER

The Arch is more than than just a coal saver.

It is the equivalent of a larger boiler.

It means more steam from the same boiler.

More power from the same coal consumption.

This means more tonnage hauled for the same labor at the firedoor.

Tonnage you can secure in no other way.

AMERICAN ARCH COMPANY, Inc.

LOCOMOTIVE COMBUSTION ENGINEERS.

McCormick Bldg.
Chicago, Ill.

17 East 42nd Street
New York City

JOHNS-MANVILLE RAILROAD PRODUCTS

Locomotive Lagging, Locomotive Spiral Pipe Covering, Locomotive Packings, including Air Pump, Throttle, Valve Stem, Cab Cock, Gaskets, etc.; Pipe Coverings for all classes of service. Sheet Packings, High Temperature Cements, Steam Traps, Electrical Supplies, Insulating Cements, Asbestos Roofings, Asbestos Shingles, Corrugated Asbestos Roofing, Industrial Flooring, Transite and Ebony Asbestos Wood, Transite Smoke Jacks, Refrigerator Car Insulation, Steel Passenger Car Insulation, Packing Cups and Gaskets, for Air Brake Cylinders Expander Rings No. 82 Moulded Packing Cups and Expander Rings for Power Reverse gear cylinders.

Canadian Johns-Manville Co. Ltd.,
Toronto Montreal Winnipeg
Vancouver Hamilton
Ottawa Windsor

PACKINGS

Anchor Fibrous,
Canuck Leather,
King Metallic.

CANUCK FRONT END PAINT.

CANUCK SUPPLY Co. LIMITED.
OFFICE and FACTORY : 371 AQUEDUCT ST., MONTREAL.
Branches : Toronto and Winnipeg.

VAPOR CAR HEATING CO. (Inc.)

RAILWAY EXCHANGE—CHICAGO

Successor to

Chicago Car Heating Co. and
Standard Heat & Ventilation Co. (Inc.)

NEW YORK, BOSTON MASS
MONTREAL, Que.
61 DALHOUSIE STREET
WASHINGTON, D.C., ATLANTA, Ga.

F. A. PURDY, *Sales Representative.* **S. P. HARRIMAN,** *Canadian Agent.*

West Disinfecting Co.

Manufacturers of

DISINFECTANTS---LIQUID SOAPS---PAPER TOWELS AND SANITARY APPLIANCES.

301 Casgrain Street, Montreal, P.Q.

Canadian Railway Club

INCORPORATED

Official Proceedings

Officers, 1921-2

President:

Mr. A. CRUMPTON,
Valuation Engineer, G.T.R., Montreal

First Vice-President:

Mr. G. M. WILSON,
Supt. Motive Power, Point St. Charles Shops, G.T.R., Montreal

Second Vice-President:

Mr. E. E. LLOYD,
Assistant Comptroller, C. P. R., Montreal

Executive Committee:

Mr. E. R. BATTLEY,
Supt. of Motive Power, Eastern Lines, G.T.R., Montreal

Mr. H. R. NAYLOR,
Asst. Works Manager, C.P.R., Montreal

Mr. C. E. BROOKS,
Mech. Asst. M. P., Canadian National Rly., Toronto, Ont.

Mr. R. J. NEEDHAM,
Mech. & Elec., G. T. R. System, Montreal, P .Q.

Mr. J. A. SHAW,
Elec. Engineer, Canadian Pacific Railway, Montreal, P. Q.

Mr. W. U. APPLETON,
Gen. Supt. R. S., Canadian National Rly., Moncton, N. B.

Audit Committee.

Mr. W. H. LANGRIDGE.
Auditor Stores & Mech. Accts., Angus Shops. C.P.R., Montreal

Mr. C. F. NEEDHAM,
Asst. to Gen. Supt. M. P. & Car Depts., G. T. R., Montreal, P. Q.

Mr. J. BURNS.
Works Manager, C. P. R. Angus Shops, Montreal, P. Q.

Secretary

Mr. W. A. BOOTH,
Engineer of Locomotive Construction, G.T.R., Montreal

Treasurer:

Mr. P. P. Reynolds.
Chief Clerk to Chief of M. P. & R. S. C. P. R., Montreal, P. Q.

Past Presidents:

Mr. E. A. WILLIAMS,
259 Ridgewood Ave.,
Glen Ridge, N.J., 1903

Mr. T. McHATTIE,
12 Windsor Ave.,
Westmount, 1904

Mr. S. KING,
870 Queen's Ave.,
London, Ont., 1905-06

Mr. W. E. FOWLER,
941 Beacon St.,
Los Angeles, Cal., 1906-07

Mr. W. D. ROBB,
Vice-President, G.T.R.,
Montreal. 1907-08

Mr. L. R. JOHNSON (deceased),
Montreal, 1908-09

Mr. H. H. VAUGHAN,
905 Guarantee Building, Beaver Hall Hill,
Montreal, 1909-10

Mr. A. A. MAVER (deceased),
Montreal, 1910-11

Mr. A. A. GOODCHILD,
General Storekeeper, C.P.R.,
Montreal, 1911-12

Mr. J. COLEMAN,
Asst. to Genl. S. M. P. & Car Depts., G.T.R., Montreal, 1912-13

Mr. R. W. BURNETT,
Vice President Natl. Car Equipment Co., Chicago, 1913-14

Mr. W. McNAB,
Chairman, Valuation Committee, G.T.R., Montreal, 1914-15

Mr. LEWIS C. ORD, England, 1915-16

Mr. R. M. HANNAFORD,
Asst. Chief Engineer, Montreal Tramways Co., Montreal, 1916-17

Mr G. E. SMART,
Mechanical Assistant, Car Dept. Canadian National Railways,
Toronto, 1917-18

Mr. C. W. VAN BUREN (deceased)

Mr. T. C. HUDSON,
Gen. Master Mechanic, Can. Natl. Rlys., Montreal, 1918-19

Mr. J. HENDRY,
43 Chesterfield Avenue,
Westmount, 1919-20

Mr. W. H. WINTERROWD,
Chief Mechanical Engineer, C.P.R.,
Montreal

Published every month, except June, July and August, by the Canadian Railway Club,
W. A. BOOTH, Secretary, 53 Rushbrooke Street, Montreal.

Vol. XXI. No. 3 **Montreal, Can., March., 14th 1922** 25c. per copy

PROCEEDINGS OF THE CANADIAN RAILWAY CLUB

Windsor Hotel, Montreal,

March 14th, 1922.

Chairman (Mr. G. M. Wilson) :—

Owing to the absence of our worthy President who has gone to Chicago on railroad business, I have the honor to occupy the chair tonight, gentlemen, and if you will sign the attendance cards, we will proceed with the meeting. We will dispense with the reading of the minutes of last meeting as they have been printed and mailed to you.

MEMBERS PRESENT.

Beahan, J. P.
Bondy, A.
Brandon, J. D.
Branston, W.
Broaderup, M.
Buckland, A. W.
Butler, A.
Childs, P. T.
Clark, H. A.
Clibbon, A. T.
Crockett, W. B.
Doherty, H. J.
Dohm, J. T.
Foster, J.
Fraser, J.
Gardner, K. V.
Harragin, H. C.
Harrison, E. V.
Harrison, J.
Hartenstein, W.
Hellyer, G.
Hillman, S.
Hopperton, L.
Horsfall, T. C.
Hunter, W.
Irving, R.
Jeffries, G.
Kelly, E. J.
Kierans, H.
La Montague, C. E.
Landry, G. W.
Lecavalier, A.
Lowe, W. S.
Lytle, A. C.
Mackie, R. L. D.
Munro, K. E.
McCracken, F. C.
McDonald, A.
McEwan, W. H.
Neale, G.
Needham, R. J.
Nicholson, N.
Normandin, M. G.
Norris, R. A.
O'Brien, J.
Oliver, C. L.
Oliver, R. M.
Palmer, H. A.
Parsons, G.
Peverley, R. D.
Pierpoint, F. H.
Playfair, J.
Powell, J.
Prevost, L. E.
Pyke, G. M.
Ross, J. D.
Ross, N. E.
Richardson, S.
Riddington, A.
Savoy, F.
Spalding, E. C.
Starkey, J. B.
Stock, F. J.
Symmes, H. F.
Taylor, J.
Thorburn, C. D.
Thorp, H. W.
Whitehouse, W. M.
Wilson, G. M.
Wyer, F. H.
Booth, W. A.
and others.

Chairman:

The Secretary will now read the list of applications for membership which have already been passed upon by your Executive Committee.

NEW MEMBERSS.

Burch, F. G., Canadian Ingersoll Rand Co., Montreal.
Carter, Wm., Asst. Gen Sales Manager, Can. Ingersoll Rand Co., Montreal.
Farrell, J. Salesman, Northern Electric Co., Montreal.
Hamilton, W. R Stratfird Shops, Grand Trunk Rly., Stratford, Ont.
Kenkel, J. Clerk, Office of V. P., Grand Trunk Rly., Montreal.
Kwan, Y. L. Chief Trans. Div'n. Traffic Dept., Chinese Govt. Railways, Montreal.
Parker, W. Sales Manager, British Amer. Oil Co., Montreal.
Patterson, R E. General Manager, Globe Indemnity Co., Montreal.
Redmond, W. M. Sec. to Gen. Supt. Car Service, G. T. R., Montreal.
Robinson, H. A Sales Dept, Taylor and Arnold Eng Co., Montreal.
Wang, H. Chief, Land Dept., Chinese Govt. Rlys., Montreal

Chairman

We have with us this evening, Mr. H. A. Balkwill, Car Accountant, Grand Trunk Railway System, Montreal who will read a paper entitled "The Railway Chief Clerk— his problems, duties and required qualifications."

I have had the pleasure of reading Mr. Balkwill's advance copy and think you will agree with me that he has touched on every point concerning the chief clerk. It is not a very lengthly paper, but I believe Mr. Balkwill considers that brevity is the soul of wit and it should bring out some discussion. It is full of good, solid matter and I do not think there is any danger of anyone going to sleep while the paper is being read. I have pleasure in introducing Mr. Balkwill.

Mr. H. A. Balkwill.—

The modern Railway is of so complex a character and the Chief Clerk is such an important part of the Railway organization that we cannot hope to deal fully with our subject in the time allotted to us.

I am aware that in claiming such an important position for the Chief Clerk, a very prominent railway man some years ago declared the position illogical, mainly on the

ground that no man can sign another man's name without a "Dishonest violation of the fundamental laws of matter."

It is respectfully submitted, however, that the position of the Chief Clerk, not only before, but since this statement was made, has proven its worth and granting his place in the modern railway organization there can be no doubt in respect to his responsibilities; his problems will, of course, like his responsibilities be governed by the size of the staff over which he has control as well as the nature of the peculiar duties of the office with which he is connected. We will endeavour to show later that the qualifications necessary to a successful Chief Clerk are those which all of us must posresultant credit.

It is, of course, a fundamental truth that no man can serve two masters. The modern chief clerk in a large railway office, however, successfully upholding his chief to the benefit of the Company by demonstrating to his fellow employees that his selections for the various tasks are in line with justice and the legitimate demands of their employer has as closely approached this impossible task as can well be expected of any man and has thereby solved one of his most, if not the most important problem confronting him. The problem I refer to is that of securing an organization, for it is a fundamental truth that team work will give results greatly in excess of uncontrolled individual effort. As the ability of each employee differs in degree, it is absolutely necessary that they be assigned to the various tasks, so as to become an efficient whole, thereby securing the maximum of service for the Company. The wise employee will admit the truth of this statement, as an unorganized staff or a staff not properly organized will require a larger number of employees with a possible decreased out-put and it does not necessarily follow under such conditions that the Company alone will be the loser.

The problems generally confronting the Chief Clerk in some of the more important offices of a railway are as varied as the ramifications of the road itself and if he is to successfully measure up to his responsibilities, he should have a general knowledge of matters affecting every activity of his Railroad as well as the work of his own particular office. The majority of employees are conscientious, not merely time servers, but being human dislike and resent apparent injustice. A successful Chief Clerk will, therefore, see that

his fellow employees receive justice with courteous treatment, for courtesy will ever bring large dividends in the dealings of every day life. We can all possibly recall men eminently just, but so harsh in manner as to largely counteract the justness of their actions.

I have endeavoured to stress in the previous paragraphs the important facts confronting the Chief Clerk, that he must secure for his Company efficient as well as cheerful service by wise selection, firm and courteous bearing, so that both he and his fellow employees will be dividend producing advertisers for their road instead of being merely an eight hour day clerk. A disgruntled employee is not a profitable investment during office hours, and may by his "knocking" both at home and in society become a positive liability.

If the duties of a Chief Clerk bring him in touch with the public his problems as well as his responsibilities are necessarily increased, as the particular problem then confronting him is to satisfactorily meet the demands of those whose knowledge of the difficulties concerning railway operation must of necessity be limited, and while a great majority of the public are fair and broad-minded, still there is always a considerable portion to whom the one and only important matter before the Railroad is their particular case, and no allowance will be made for any failure to measure up to the standard set up by them. In fact cannot we Railroad men recall a similar attitude of mind towards commercial houses when to us they have most inexcusably failed in service.

The wise Chief Clerk will also always bear in mind that the telephone is probably the most important point of contact with the public and will carefully mark the manner in which the public is approached by this avenue. Even an unwise answer over the phone will leave a feeling of irritation and may result in the shipper listening to the wiles of the other road's solicitor. Of course there is as much human nature in the public as in Railroad employees and occasionally the employee is hard put to control his temper. In such an event he should be trained to turn the customer over to the Chief Clerk, whose larger experience will generally win the day. Do not let us forget that while a soft answer will turn away wrath a wise answer in the first instance will obviate the necessity for the soft answer later on.

It will be noted that no endeavour has been made to draw

a sharp distinction between the responsibilities, the problems and the qualifications of a Chief Clerk, as it is somewhat difficult to separate them into their component parts and our purpose will be equally served if we do not attempt to draw too sharp a distinction. If, therefore, we are prepared to admit the responsibility attaching to the position, it logically follows that the problems add to the responsibilities and the responsibilities are because of the duties confronting the occupant of the office.

The Head of some offices is of necessity absent from headquarters a considerable portion of each month; the Chief Clerk then becomes in the full sense of the term the "Assistant" and must shape his actions so that the best interests of the Company as laid down by his Head will be fully served. This emphasizes the necessity for practical knowledge of all of the details of the work coming under his supervision, so that urgent and unexpected demands for special information or statistics in which time is a vital essential can be fully complied with.

Of course, Chief Clerks being only human we sometimes find that the possessor of the title has magnified the importance of his position and has assumed responsibilities out of all proportion to their real value; then is the unfortunate caller overawed by the magnificent presence and regal manner and if he does not feel that his business demands an interview with the Head, he frequently leaves that particular office fighting mad with a desire to get even with the cause of his irritation. If, however, the caller finds it necessary to see the Head of the department he draws his first assured breath only on being admitted to the private office, feeling that he has come in contact with the fallible human being.

On the other hand we have the timid Chief Clerk———A man afraid to shoulder responsibility and apparently unable to reach a decision even in matters of every day detail. Such a one is greatly bothered by a request for a prompt decision and usually asks that the matter be submitted in writing, so that careful consideration may be given to it. Of course, such a Chief Clerk has his value to the pulp and paper industry, as many a file of correspondence is started on its innocent way to assume large proportions simply as the result of the timid Chief Clerk.

Again we have the offhand Chief Clerk———The bright snappy optimistic fellow to whom all things are possible and

will promise practically everything requested, but whose promises must of necessity fall short on many occasions.

It is a source of satisfaction, however, to note that such varieties of Chief Clerks are becoming rare———necessarily so, as modern business has no room and cannot afford time for self-glorification, undue timidity or reckless optimism.

As against the foregoing, let us recall with pleasure the competent Chief Clerk encountered in so many of the offices of the Railroad, whose quiet manner, supported by an intelligent grasp of the subject, leaves you with a feeling of respect, not only for the Chief Clerk as a man, but for the office of the road he represents.

In considering the qualifications required by the really successful Chief Clerk, we could, of course, sum it up in the one word "Efficiency." This word has, however, I think, been over-worked and does not completely define the qualifications considered necessary and it will, therefore, doubtless prove profitable to consider the matter in more detail.

A certain Railroad man of this continent in an endeavour to bring himself prominently before the Railway public has stated he possesses the qualifications of being "Viciously ambitious and yet cautious and determined." Without ambition advancement cannot, of course, be achieved, but I fail to comprehend why a man should claim viciousness as a virtue necessary to advancement. Viciousness must necessarily be a handicap even to the "Cautious and determined" man. I would strongly advise my ideal Chief Clerk to purge such a poison out of his system without delay,———would not the better motto be "Ambition controlled by fairness and aided by determination."

As the ideal Chief Clerk I would picture a man mentally alert with a broad understanding of humanity, whose heart is kept in proper control by his reason. In such a person we will expect to find, and will find enthusiasm, for enthusiastic leadership will turn many an apparent defeat into victory. With it the morale of the staff will be raised to a high level and will be consistently maintained, resulting in more efficient service. In fact I would place enthusiasm properly controlled close to the top of the qualifications required by the successful Chief Clerk.

We have, however, referred previously to the necessity of the Chief Clerk securing cheerful as well as efficient service. This of necessity involves a systematic arrangement of the

work, but system must not become a fetish, otherwise the results will not be those hoped for.

These two qualifications, namely, enthusiasm and system, necessarily imply the faculty to plan.

If, therefore, we are prepared to admit that enthusiastic leadership and systematic arrangement of the office are essentials to the career of a successful Chief Clerk, it necessarily follows that the possessor of these two important attributes must likewise possess the power of seeing, to a certain extent, into the future and be able to plan for to-day, so that to-morrow's changes may be taken care of without serious derangement of the main plan of the organization.

Thus enthusiastic leadership, aided by judicious system, strengthened by foresight, will go far towards success and the office so blessed with a Chief Clerk possessing these attributes will rank high in the organization of any road. In fact a staff of average ability under such conditions will give better results than one depending rather on the outstanding abilities of the few, hindered more or less by the unintelligent efforts of the many.

I have endeavoured to show that the qualifications I would demand in the ideal Chief Clerk are those of enthusiasm, systematic habit of mind, ability to forecast and plan for the future, ability to select the individual for the work best suited to his mental qualifications, firmness of character tempered by mercy, so that true justice will prevail. Such a one will of necessity be courteous; in fact I would again emphasize the tremendous importance of courtesy. Many a man occupying a high position, occupies the position in some measure at least to say "Please" and "Thank You" with such natural courtesy that it is a pleasure to render such a one a service.

In concluding I cheerfully admit the ideals I have endeavoured to set forth are high ones, but on the other hand can claim that the Chief Clerk possessing such characteristics will successfully deal with his daily problems and will fully measure up to his responsibilities.

Chairman:

You have heard the reading of this paper on the Railway chief clerk. As I said before, it had not been a lengthy one but there is lots of room for discussion. The qualifications necessary for a chief clerk do not only apply to him

but also to others occupying any position of responsibility and we have a lot to learn from the reading of the paper. I trust the subject will be taken up and discussed freely as we have plenty of time, and I would like to hear from Mr. Masse as to what he has to say about the paper.

Mr. O. Masse:—

Mr. Chairman and Gentlemen,—To begin with, I think it is rather unfair to be called first on the list, not being a chief clerk, nevertheless I have had sufficient experience to appreciate Mr. Balkwill's address and feel that he has thoroughly defined the merits of the good chief clerk. I was chief despatcher in Montreal for ten or eleven years and during this period frequently came in contact with the chief clerk in the superintendent's office and it has always been my impression that if the chief clerk would do less clerical work himself and let some of his staff do it, and occupy his time in studying the various important reports submitted to the superintendent, which he has to persue before they are turned over to him, it would be more beneficial to the reailway in general. I notice that Mr. Balkwill has touched upon courtesy and I feel it does not only affect the chief clerks but ever railroad employee as well. It costs nothing and goes a long way towards making everyone feel happy and contented. I feel that the chief clerk (and I am speaking now more in connection with the Transportation department) should get into close touch with the trainmaster and chief despatcher, in regard to the transportation details so that he would always be well posted and able to represent the superintendent in his absence, on any matter that might come up. I must confess, gentlemen, that I was not prepared to make any remarks whatever this evening; however, I thank you for having called on me.

Mr. Jas Powell:—

I have never held a position as chief clerk although perhaps in my experience I have had some dealings with them, but from what I have heard tonight, I think the speaker has painted too bright an ideal chief clerk and such as he has painted are few and far between. It is all very well for the chief clerk to be courteous and dignified but when the little office boy comes along at the call of the buzzer he often comes with fear and trembling wondering just what he is going to receive. The pretty feminine filing clerk

for correspondence gets flustered and is doubtful if she can find what he wants on the minute. The young married man who is harried by his wife to ask for an increase in salary is afraid to do so for fear of losing his position. Then the supply man comes along. He wants to see the head of the department. The chief clerk perhaps has a grudge against him and makes a pretense of going into the office to see the head, comes out again and says "I am sorry, the chief is busy this afternoon. He is going away for two weeks and won't be able to see you until he comes back." I would like to see chief clerks conduct the business of their office as Mr. Balkwill says and then there would be more co-operation and good will towards the chief clerk.

Chairman:—

I am surprised at the remarks made by Mr. Powell about chief clerks going in to see the head and coming out with a story such as he mentions. That is almost impossible in a railway office. Has Mr. Needham anything to say on this subject?

Chairman:—

Perhaps we might hear from Mr. Riddington.

Mr. A Riddington:—

I am going to speak, Mr. Chairman. I want to congratulate Mr. Balkwill on the practical manner in which he has handled the paper. I have a few supplementary remarks which I might read if you don't mind.

The success of every enterprise depends, to a large extent, upon the harmonious action of the different factors making up the organization. In a railway organization, and this applies with equal force to any commercial enterprise, the Chief Clerk, or the fellow who stands next to an executive officer, and through whose hands the various items of business pass, is a very important element. Nomially his duties consist of having charge of a number of clerks, but practically these duties are both numerous and diverse, and his personal connection with the boss gives him really unlimited scope for his abilities should he wish to apply himself to the problems which confront his department. He may become a driving wheel in the locomotive of progress or merely a truck wheel helping to carry the weight.

I mentioned a moment ago that the duties of the chief clerk were numerous and diverse. There are chief clerks

here whose hair has turned grey, or perhaps they have lost it altogether, in their efforts to be good chief clerks and they well understand what is meant by the duties of the chief clerk being numerous and diverse, but to the uninitiated I would say that he is in the first place required to keep the office boy in order,—pretty nearly one man's job in itself; and maintain correct discipline of the clerks under him. He must also be able to say "no" in 99 different ways, and yet not use that particular word, to persons calling and who are looking for passes or other favors to which they are not entitled and whom he does not wish to antagonize. He must entertain the supply boys while they are cooling off their heels in the ante room, answer enquiries at his desk and at the telephone including the false telephone calls.

Water finds a level, and a stream never rises higher than its source. The fellow who cannot think big things certainly cannot do them. The value of a chief clerk, it seems to me, lies in his ability to get a comprehensive view of the interests of the concern or the department for which he is working. If he can think like an executive he will naturally progress to an executive position. If he has only the interests of his job at heart he will not likely rise above it, but if he has the interests of the corporation for which he works at heart he will probably some day assist in controlling that corporation.

Our social and commercial existence is after all a big game of competition in which the fellow with the knowledge and ability to apply it always wins.

Chairman:—

In reference to Mr. Riddington's remarks about the chief clerk having the interest of his company at heart. I really do not think a man could be a chief clerk unless he had, for I have never yet met one who did not, in fact he seems to run the job as though he himself owned the concern. I see Mr. Parsons here. He might have something to say?

Mr. Parsons:—

I do not know that I have anything to say except to thank you for the privilege of being present as a guest this evening. I believe the paper read to us thoroughly covers the subject, so much that were we to assign to each of the numerous points brought out by the speaker, a certain number

of marks of percentage, we could "size up" ourselves by this standard and work out our own percentage of efficiency.

Chairman:—

Surely there are some supply men who can give us their experience with chief clerks. What has Mr. Brandon to say?

Mr. J. D. Brandon:—

I do not know why the chairman has picked on me for remarks unless it is that he knows I have had to sit on the outside so much waiting to see the chiefs that I should be very well acquainted with all the chief clerks. I have come in contact with many chief clerks and have had experience with some of them that it seemed to cause them a great deal of pleasure to keep you from seeing their superior officers. There are others that although you are delayed in seeing their chiefs it is a pleasure to wait on accuont of the courteous treatment received. I think that the ideal chief clerk from the supply man's point of view is the one that is courteous and honest. I am not prepared to say anything further on this subject, as Mr. Beahan has been preparing notes on this subject and as he has had more experience than I have with chief clerks. I would like to hear from him.

Mr. J. P. Beahan:—

Mr. Brandon has been urging me all evening to say something since Mr. Balkwill finished his paper and as Mr. Brandon is acquainted with nearly all chief clerks in the Motive Power Department, and he was afraid that some of the chief clerks would run him out of their office the next time he called upon them, however he seems to have lost his nerve and is turning the tables upon me, but I did not expect to be called upon myself. However, I might say that in my 15 years of travel both in the United States and Canada, I suppose I have come in contact with most of the chief clerks to superintendents of motive power, master mechanics, general foremen and purchasing agents all over the continent, and I must say that during the time I have done business in Canada, it has always been a pleasure to call upon the chief clerks, for the simple reason of the courtesy I have received from these gentlemen. I realize that the chief clerk' position is a very important one, and that he is at all times a very busy man himself, because a

great deal of the detail work falls to his lot, and he can handle same without reference to his chief. It appears to have been a standard rule of most of the railroads of Canada, to receive representatives of Supply Houses with the greatest of courtesy, for I cannot recall of a complaint from any of my acquaintances where they have not been received in such manner. Sometimes one has to travel thousands of miles to see an official of the railway, which interview, in addition to the expense incurred and time taken up in travel, is of the utmost importance both to the representative and House concerned, and a great deal of assistance and encouragement can be given by the chief clerk in the reception given. If one is put off and not able to see that official, Brandon says "you have a heartache," but fortunately I have never had a "heart ache" from being turned down in Canada. I have had some ups and downs, but the chief clerks always managed to receive me and make things pleasant for me. I have noticed quite a difference between the Canadian and American chief clerks. I have heard it said that you would think some of them are the presidents of the roads themselves. If your are a friend of theirs, all is right, but if not, it does not go very well with you, but I have not noticed that among my Canadian friends here.

I will read you a few verses which appealed to me and are entitled:—

DO IT NOW

If with pleasure you are viewing any work a man is doing,
If you like him or you love him, tell him now;
Don't withhold your approbation till the parson makes oration
And he lies with snowy lilies o'er his brow.

For no matter how you shout it, he won't really care about it;
He won't know how many teardrops you have shed,
If you think some praise is due him, now's the time to slip it to him,
For he cannot read his tombstone when he's dead.

More than fame and more than money, is the comment kind and sunny,
And the hearty, warm approval of a friend;
For it gives to life a savor, and it makes you stronger, braver,
And it gives you heart and spirit to the end.

If he earns your praise, bestow it; if you like him, let him know it,
Let the words of true encouragement be said;
Do not wait till life is over and he's underneath the clover,
For he cannot read his tombstone when he's dead.

Mr. P. P. Reynolds:—

The subject of the paper tonight is one which it seems to me rather difficult to speak on. The chief clerk is such a matter-of-course person that he is practically one of the office fixtures, and it is difficult to analyze his position.

One of the speakers tonight charged that visitors to heads of the departments in coming in contact with the chief clerk in the outer office and making known their wishes, often had the experience of the chief clerk making a pretense of entering the private office, coming out again, and advising the visitor "he was sorry that the Chief was just about going out on a two weeks' trip, and would be unable to see him." This seems to me to be stretching it a little. One of the qualifications of a good chief clerk is honesty, an honest chief clerk will not bring any such story to a visitor, but will be able to tell him whether the chief can grant the interview, and if not, the reason why.

The chief clerk is largely whatever the head of the department makes him. Some men use their chief clerk as more or less of a general assistant. All the correspondence and details in connection with the department pass through the chief clerk ,and this, of course, makes him familiar with absolutely everything pertaining to the workings of the department, and in this way he can not only very much assist the chief in remembering various details, but having a knowledge of most everything that is going on, he can in the absence of the chief carry on the work pretty much as would be desired by the head of the department. Another of the qualifications, and I believe the greatest, is loyalty. The chief clerk should be loyal to the company employing him and to his superior.

The first speaker referred to the chief clerk of ten or twelve years ago being loaded down with details. I do not think that this condition will be found in most of the large offices of today. The arrangement which you will find to be quite general today is that the chief clerk has an assistant who takes care of a lot of the routine work, leaving himself free to carry on with the duties just referred to.

Chairman:—

I would gather from the remarks of Mr. Reynolds that the chief clerk is a man with a memory, in other words, a man is as capable as his memory and I think Mr. Reynolds is right, in fact, it does not matter whether a chief clerk or any other position of responsibility, a retentive memory is a very valuable asset. Well, gentlemen, the discussion tonight has I believe been very profitable to us all. There are many things I have taken home to myself that I can profit by and I think Mr. Balkwill's paper is one that will live in our memories for a long time, and as the hour is late, unless someone else has something to say, I might announce that at our next meeting in April, we will have Mr. S. J. McLean, Deputy Minister, Board of Railway Commissioners, as the speaker, and I trust we will have a good attendance, for I am sure it will be something worth while.

Mr. J. Powell:—

Mr. Chairman, before the meeting closes, there should be a vote of thanks passed to Mr. Balkwill. With regard to the sarcastic remarks he says I made. I made these remarks with the idea only of promoting discussion and bringing the chief clerks present to their feet to give their views. I have pleasure in proposing a vote of thanks to Mr. Balkwill for his able paper.

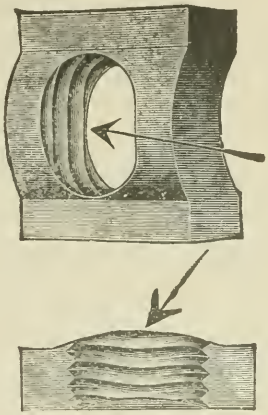
Mr. P. P. Reynolds:—

I have pleasure in seconding the vote of thanks.

Chairman:—

Mr. Balkwill, it is very evident that everyone has appreciated your nice paper and I trust that at some future date you will be able to give us another along some other line.

Refreshments will be served in the room at the right.



This cut shows an exaggerated curve in thread pitch.

'Grip Nuts Lock'

Simplicity, efficiency and economy are three reasons why GRIP NUTS lead the field

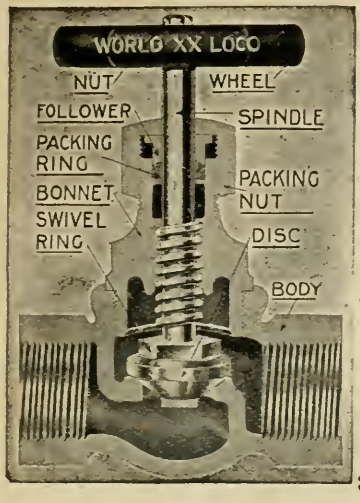
Easy to apply, absolute in locking, simple to remove

For Particulars, Write

Canada Grip Nut Company, Ltd.

MONTREAL, Que.

FOR SALE



"World" xx LOCO. Valves

STANDARD On all C. P. and C. N. Ry Lines.

Parts Interchangeable absolutely

Reseating Tool for "WORLD"

x x Loco Valve for re-seating globe, angle and check valves.

SIZE	RESEATS
No 1	$\frac{1}{4}$ - $\frac{3}{8}$ - $\frac{1}{2}$
No 2	$\frac{3}{4}$ - 1 - -
No 3	$1\frac{1}{4}$ - $1\frac{1}{2}$ - -
No 4	2 - $2\frac{1}{2}$ - -

A necesssary part of every stations stores.

TRADE MARK WORLD McAVITY'S GUARANTEE

J. McAvity & Sons, Ltd.

Valves Fittings & Supplies

GOODS GUARANTEED GOOD BY ALMOST A CENTURY'S EXPERIENCE ESTD. 1834

St. John, N.B. Canada.

To Solve
your
Belting
Packing
Hose Problems

See DUNLOP

ELVIN MECHANICAL STOKERS

INCREASE LOCOMOTIVE RATINGS
DECREASE FUEL CONSUMPTION
SHOW LOWEST MAINTENANCE COST.

— — MADE IN CANADA. — —

ELVIN MECHANICAL STOKER COMPANY
50 CHURCH STREET, - - - - NEW YORK.

BABBITT METALS

For all purposes

SOLDERS **TYPE METALS**
SPECIAL ALLOYS

Made to specification

MOUNT ROYAL METAL COMPANY
31 St. Nicholas St., Montreal

THE BIRD-ARCHER COMPANY

33 Rector St., New York
Cobourg, Canada

CHEMICALS FOR THE LOCOMOTIVE

POLARIZED—

ANTI-SCALE,
ANTI-FOAMING,
ANTI-LEAK
TREATMENTS

HAVE GIVEN SATISFACTION FOR YEARS

BACO CHEMICAL FOR THE FOUNDRY,
CORE OILS AND COMPOUNDS,
CORE WASH AND FACINGS,
BRASS CLEANER (Not a Flux),
IRON CLEANER,
FURNACE CEMENT,
UNIVERSAL BLACKING,
PARTING

ARE GIVING THE SAME SATISFACTION AS OUR LOCOMOTIVE CHEMICALS.

WHY NOT TRY THEM?

Canada Iron Foundries, Limited

MANUFACTURERS OF

CAR WHEELS

CAST IRON PIPE

CASTINGS OF ALL KINDS

WORKS AT
Three Rivers, P.Q.
Fort William, Ont.
St. Thomas, Ont.
Hamilton, Ont.

Head Office:
MARK FISHER BUILDING
MONTREAL

West Disinfecting Co.

Manufacturers of

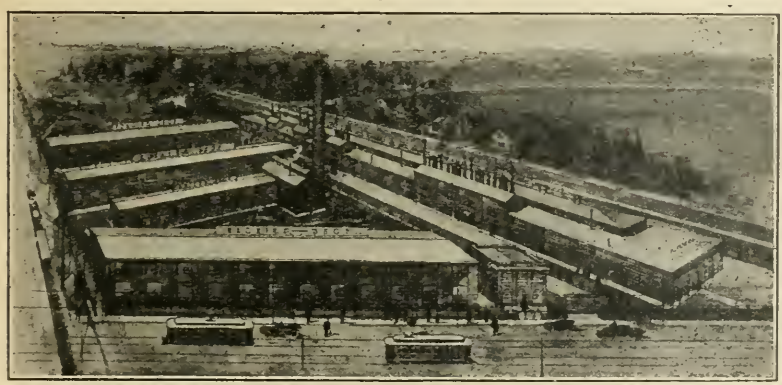
Disinfectants,
Liquid Soaps,
Paper Towels and
Sanitary Appliances.

301 Casgrain Street,
Montreal, P.Q.

"HISCO" PRODUCTS

Include Car Castings and Locomotive Parts of every description

DRIVING WHEELS
ENGINE FRAMES, BUMPERS
CENTRE PLATES, Etc.



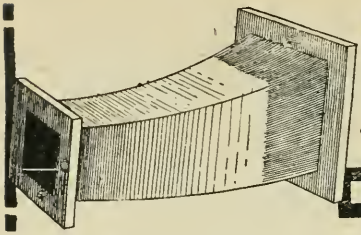
THE HOME OF "HISCO" PRODUCTS

The Hull Iron & Steel Foundries
LIMITED

Manufacturers of

CHROME, CHROME NICKEL, MANGANESE
AND MILD STEEL CASTINGS

HULL - - - - CANADA



STEEL CASTINGS

Acid Electric Process up to 15 tons

The Thos. Davidson Mfg. Co. Limited

DAVIDSON

HEAD OFFICE
187 Delisle St.
Montreal
Phone Victoria 492

S. F. BOWSER COMPANY, Ltd.

Original Patentees and Manufacturers of

SELF MEASURING PUMPS, GASOLINE AND OIL STORAGE TANKS, FILTRATION EQUIPMENT AND AUTOMATIC OIL MEASURES.

PLANT AND OFFICES:

66-68 **FRASER AVENUE** - **TORONTO, CANADA**

NOVO SUPERIOR

HIGH SPEED STEEL

J. & C. WARRANTED CAST STEEL TOOL STEEL FOR EVERY PURPOSE

SOLE AGENTS FOR CANADA

Pilot Steel & Tool Co., Limited

332 St. James Street - - Montreal

F. E. REJALL, *Vice-President and Manager.*

Telephone—Main 2354

THE ARTHUR POWER SAVING RECORDER
THE UTILITY HEAT REGULATORS
THE UTILITY 100% VENTILATORS
THE O.W.M. TRACK SANDERS
THE BUFFALO BRAKE BEAMS

EQUIPMENT SPECIALTIES LIMITED

10 St. Antoine Street

Phone Main 6697 **MONTREAL** P. O. Box 1722

J. M. T. Improved

Pressure Regulating Valve

For Steam and Air

Our patented improvement Insures perfect operation.
These valves are in service all over Canada, also abroad.

Steam Gauges--Locomotive Injectors--Safety Valves, &c.

THE JAMES MORRISON BRASS MFG. CO. LIMITED - - TORONTO

The Hanlon Locomotive Sander

ALWAYS RELIABLE
INEXPENSIVE TO MAINTAIN

The Hanlon Bulls Eye Water Glass

GUARDS AND SCREENS UNNECESSARY
ABSOLUTELY SAFE, NO DANGER OF ACCIDENTS WITH THIS GLASS

HANLON LOCOMOTIVE SANDER CO. **Winchester, Mass.**

HUNT-SPILLER GUN IRON

FOR

Locomotive Castings

ELIMINATES ENGINE HOUSE REPAIRS

MADE ONLY BY

HUNT-SPILLER MFG. CORPORATION

W. B. LEACH, President and General Manager.
J. G. PLATT, Vice President and Sales Manager.

OFFICE AND WORKS:
383 Dorchester Avenue,
So. BOSTON, MASS.

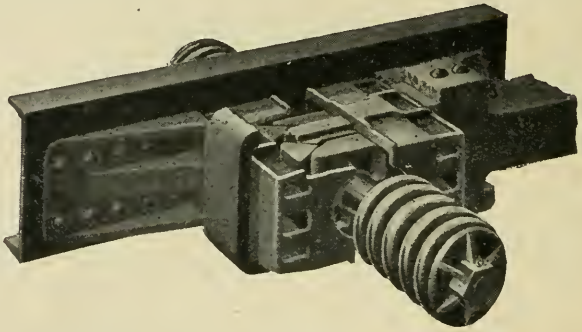
Canadian Representative:
CANUCK SUPPLY COMPANY, LIMITED,
392 St. James St., Montreal P.Q.

WEBB. G. KRAUSER

RAILWAY SUPPLIES

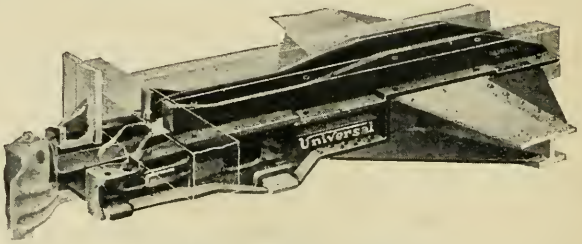
MADE IN CANADA

Cardwell Friction Draft Gear



Universal ATTACHMENTS

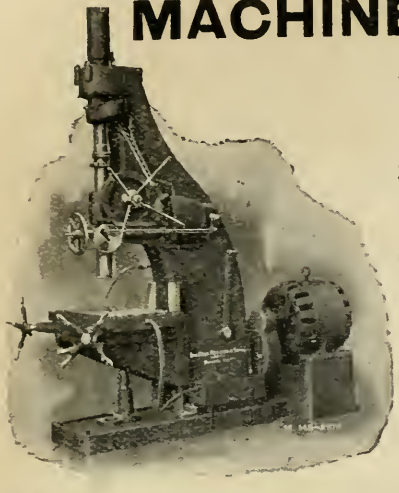
REENFORCING DRAFT ARMS



CAST STEEL YOKES
TANDEM SPRING DRAFT RIGGING
TWIN SPRING DRAFT RIGGING
DRAFT LUGS or PLATES
FRICTIONLESS SIDE BEARINGS.

Room 1023 Transportation Building - MONTREAL

BERTRAM
MACHINE TOOLS



Locomotive and Car Shop Machinery

Structural Shop Equipment

General Machine Shop Tools

Modern in Design and built for Heavy Duty.

Photos and Specifications are gladly forwarded on request.

The John Bertram & Sons Co., Ltd.

MONTREAL TORONTO **DUNDAS, ONTARIO** WINNIPEG VANCOUVER

321 POUNDS OF IRON AND COPPER

has proved sufficient for an economical and reliable car lighting generator when operating with the Stone Franklin Speed Control principle.

STONE FRANKLIN COMPANY

17 East 42nd Street, New York,

6400 Plymouth Ave., St. Louis, Mo.

Transportation Building, Montreal.

CANADIAN BRONZE, LIMITED

69 DELORIMIER AVENUE

MONTREAL, P.Q.

Journal Bearings for Passenger and Freight Service. Wearing Metal Parts for Locomotives.

Miscellaneous Brass Castings for Cars and Locomotives.

Cold Drawn Seamless Boiler Tubes and Superheater Flues

SPRING STEEL -- P. R. R. ANALYSIS

STAYBOLT IRON — LOWMOOR and NETHERTON

Stocks carried for immediate delivery

DRUMMOND, McCALL & COMPANY, Limited

28 VICTORIA SQUARE, MONTREAL

USE

JOYCE JACKS

and you will

RE-JOYCE

The Joyce-Cridland Co.

DAYTON - - OHIO

CAR LIGHTING

COMPLETE EQUIPMENT
ELECTRIC OR GAS

GENERATOR, REGULATOR AND FIXTURES

The Safety Car Heating & Lighting Co.

CHICAGO, BOSTON, PHILADELPHIA, ST. LOUIS
MONTREAL, SAN FRANCISCO

2 RECTOR STREET, NEW YORK, N. Y.

SAFETY EFFICIENCY ECONOMY

Reinforced Brake Shoes

DOMINION BRAKE SHOE CO., Limited

THE HOLDEN CO., LIMITED, Agents

350 356 St. James Street - - Montreal. P.Q.

Canadian Pneumatic Tool Company Ltd.

Manufacturers of Chicago Pneumatic Products

25 & 27 St Antoine Street Montreal.

Boyer Hammers
Little Giant Pneumatic
and Electric Drills

Simplate Valve Air
Compressors
Giant Oil Engines
C. P. Rock Drills

These products may be obtained through

THE HOLDEN COMPANY LIMITED

Canadian Steel-Tire and Wheel Company, Limited

Locomotive and Car Wheel Tires
Steel Tired Wheels of all Kinds

Works:
Montreal East

Office:
Transportation Bldg., Montreal

Smith's Falls Malleable Castings Limited

Established 1878 *Two Plants* *Capacity* 8,000 *Tons*

MANUFACTURERS OF

REFINED AIR FURNACE CASTINGS
of High Tensile Strength

Railway Car Castings a Specialty

SMITH'S FALLS, ONTARIO, CANADA.

STEEL CAR FINISHING

PRIMERS **SURFACERS**
COLORS **VARNISHES**

MAPLE LEAF
M L
FINISHES THAT ENDURE
QUALITY
PAINTS & VARNISHES

WE MANUFACTURE

Complete Systems for both Steel and Wooden Coach Finishing

FULL PARTICULARS GLADLY SUBMITTED

MADE IN CANADA BY

SAMPLES FREE

THE IMPERIAL VARNISH & COLOR CO. LIMITED
WINNIPEG TORONTO VANCOUVER
CANADA

SAMPLES FREE

CAMEL COMPANY

332 So. Michigan Avenue, CHICAGO, ILLINOIS

Camel Freight Car Door Fixtures and Repair Parts
Camel Burglar Proof Freight Car Door Locking Arrangement
Camel Freight Car Door Starting Arrangement

THE HOLDEN COMPANY LIMITED

Canadian Agents:

350 ST. JAMES ST. - - - MONTREAL, QUE CANADA

Dougall Railway Varnishes

Steel car Liquid Primer and Paste Surfacer (for both wooden and steel cars). We will gladly send you full particulars of the Dougall 15-day Formula, and 7 day Formula (for hurried work).

You should have the details of these systems handy for reference—*write to-day.*

THE DOUGALL VARNISH COMPANY, Limited
MONTREAL.
(ASSOCIATED WITH MURPHY VARNISH CO., U. S. A.)

BARBER
LATERAL MOTION DEVICE AND SIDE BEARINGS

Canadian Office:
708 NEW BIRKS BLDG.,
Montreal

United States Office:
McCORMICK BLDG.,
Chicago, Ill.

STANDARD CAR TRUCK COMPANY

NORTON Self Lowering Jacks
WILL LIGHTEN YOUR LABOR
They are the Fastest and Easiest working Jacks made
SEND FOR COMPLETE CATALOGUE
Made only by A. O. NORTON, Ltd.
COATICOOK, Prov. Quebec
Stock carried by Canadian Agents:
MUSSENS LIMITED
Montreal, Toronto, Winnipeg, Cobalt, Calgary, Vancouver.

Reduce Costs In Three Ways

Item One---MILEAGE: Galena Car, Engine, Coach and Valve Oils give most miles to the pint. Not sometimes, but **always.**

Item Two---FUEL; The superior lubricating efficiency of Galena Oils reduces the frictional load and conserves power in the prime mover, effecting substantial savings in fuel.

Item Three---REPAIRS; The vitality, or lasting BODY of Galena Oils, gives endurance---the ability to protect and preserve equipment, with the consequent reduction of repairs and replacements.

These are three characteristics of Galena Oils that have been demonstrated too often in competitive tests to admit of dispute. Any one of the three provides sufficent saving in operating costs to offset their slight price difference over ordinary oils.

Galena-Signal Oil Company
of Canada, Limited.
Toronto. Montreal.

HEADLIGHTS— WE MAKE THEM

For OIL, for Pyle ELECTRIC equipment or SPECIAL to Blue Print, and carry a large stock of standard headlight reflectors, burners, burner parts, felt wicks, and chimneys.

The Hiram L. Piper Co., Ltd.
75-81 ST REMI ST., ST. HENRY WARD
MONTREAL

Get our No. 31 Catalogue

ST. THOMAS BRONZE CO. Ltd.
ST. THOMAS, ONT.

BRASS CASTINGS

FOR THE WEARING PARTS OF LOCOMOTIVES

JOURNAL BEARINGS

Dearborn Service Saves Dollars In Locomotive Operation.

It is a case of REAL SAVING, accomplished on a scale the extent of which it is difficult to compute, when it is remembered that the savings relate to such matters as fuel, lubrication, boiler washing, time of the locomotive in service, life of boiler tubes, and repair outlay, all items that enter into the DAILY OPERATING EXPENSE.

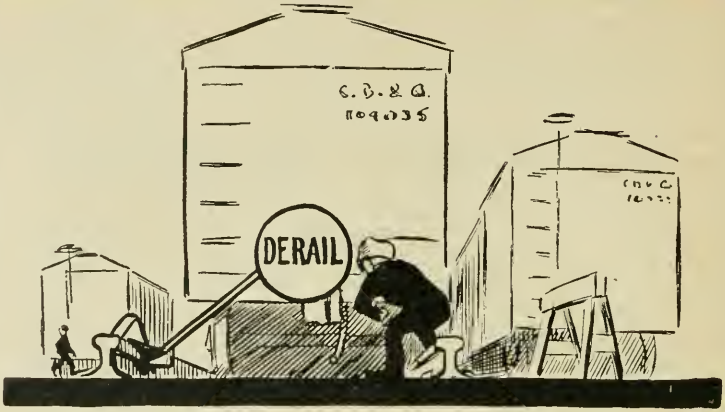
Dearborn methods of Water Treatment are scientific, yet simple. practical, and inexpensive,
Send samples of your bad water supplies for analysis, and let us advise regarding treatment. There is no charge for the analytical work.

Dearborn Chemical Company

of Canada Ltd

2454-2464 Dundas St., West,

Toronto Canada



Positive Protection

Consider the danger in repair yards and on rip tracks — men working around and under cars without proper protection. Countless times accidents have occurred for the simple reason that a train crew has failed to observe the blue flag warning.

Should a train crew disregard the blue flag, the derail becomes effective and a derailment resulting, thus protecting life and limb.

The Q & C. Portable Derail is simple, strong and effective and can be locked on the rail at any desired point. An eccentric disc automatically locks the derail to the rail; fits all rail sections; made for right, left and double throw.

Circulars sent on request

Q AND C

Our Branch Offices Span the Dominion

THE GENERAL SUPPLY COMPANY OF CANADA, LIMITED

MONTREAL **TORONTO** **356 SPARKS ST., OTTAWA** **VANCOUVER** **NORTH BAY** **WINNIPEG** **MONTREAL**

We also manufacture *Derails, Replacers, Rail Braces, Rail Benders Rail Saws, Snow Plows, Snow Flangers, Guard Rail Clamps, Guard Rail Braces, Electric Snow Melters, Rolled Steel Step Joints, Bonzano-Thomson Rail Joints,*

On the Railways of Canada

SHERWIN-WILLIAMS

Old Dutch

Railway Enamel

(*Oil Elastic*)

has by long use and severest tests proved to be the most efficient, durable and economical finishing material.

Made of the very finest pigments and colors, mixed with oxidized linseed oil, it will retain its elasticity indefinitely because no gums whatever are used in its construction,

Old Dutch Railway Enamel will wear longer than any other finishing varnish or any other kind of enamel and will reduce finishing costs to a minimun.

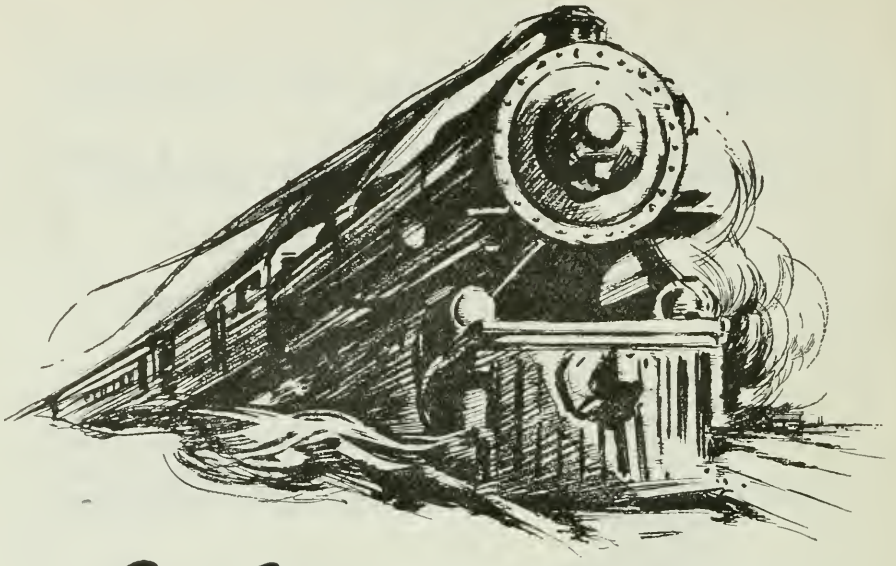
"Save the surface and you save all" *Paint & Varnish*

Write for full particulars to

THE SHERWIN-WILLIAMS CO.

of Canada, Limited.

PAINT, VARNISH & COLOR MAKERS
LINSEED OIL CRUSHERS
FACTORIES: MONTREAL, TORONTO, WINNIPEG, LONDON, ENG.



for locomotives ~

Tennessee Charcoal Bloom Staybolt Iron

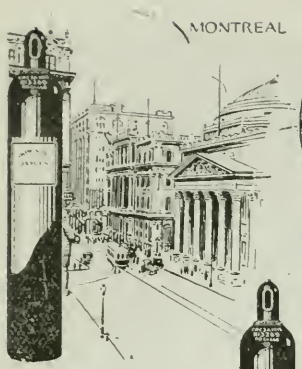
Laurel Engine Bolt Iron

Hammered Tennessee Iron Billets

—exclusive products of the Ewald Iron Company, have, for over 75 years, proved by actual results under most severe conditions, their exceptional merit for locomotive construction and maintenance.

We welcome a service test in comparison with any other iron.

CANADIAN APPLIANCE CO., Limited
AGENTS
10 Cathcart Street
MONTREAL CANADA



Dominion Oxygen

is ready for immediate delivery anywhere in Canada—

IN accordance with its published program of expansion the Dominion Oxygen Company, Limited, announces the opening of still another Distributing Station at Welland.

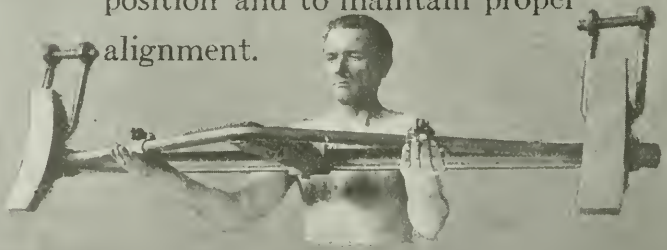
This new link in the Dominion Oxygen Service chain together with similar stations at Montreal, Hamilton, Windsor and Toronto make it possible to supply highly pure oxygen in any desired quantity to any point.

Every order for Dominion Oxygen is filled on the day it is received thus insuring to Canadian oxygen users a never-failing and prompt supply in high capacity cylinders built for economical and safe handling.

By maintaining the high standard of purity of its product and by developing still further the efficiency of its distributing organization, the Dominion Oxygen Company, Limited, will strive to continue to merit the generous patronage accorded it by Canadian oxygen users.

DOMINION OXYGEN COMPANY, LTD.
Hillcrest Park - - - - Toronto.
Hamilton, Montreal. Welland. Windsor

The springs that constitute the Creco Brake Beam Support are as sensitive to the objectionable movements of the brake beam as human arms would be in the same position. For every such movement a corrective force is exerted by the springs—it is natural and instantaneous—a truly human tendency to correct faulty position and to maintain proper alignment.



Chicago Railway Equipment Co.
McCormick Building Chicago

CANADIAN CAR & FOUNDRY CO. LIMITED

Passenger, Freight & General Service Cars

Bolsters, Brake Beams, Helical and Eliiptic Springs, Etc.

GENERAL OFFICES
TRANSPORTATION BUILDING, MONTREAL

CANADIAN STEEL FOUNDRIES, LIMITED

Acid and Basic Open-Hearth Steel and Ferro-Alloy

CASTINGS

RAILWAY TRACKWORK

COUPLERS

ETC.

Transportation Building - - Montreal

THE PRATT & LETCHWORTH CO., LIMITED

High Grade

MALLEABLE CASTINGS

Transportation Building - Montreal

Works: BRANTFORD, ONTARIO

MINER

IDEAL SAFETY HAND BRAKE

EMBODIES HIGHEST IDEALS

OF MECHANICAL DESIGN

ENSURES SAFE SWITCHING

PROTECTS MEN AND CARS

MANUFACTURED IN CANADA

CANUCK SUPPLY CO. LIMITED

MONTREAL

W.H. MINER, CHICAGO.